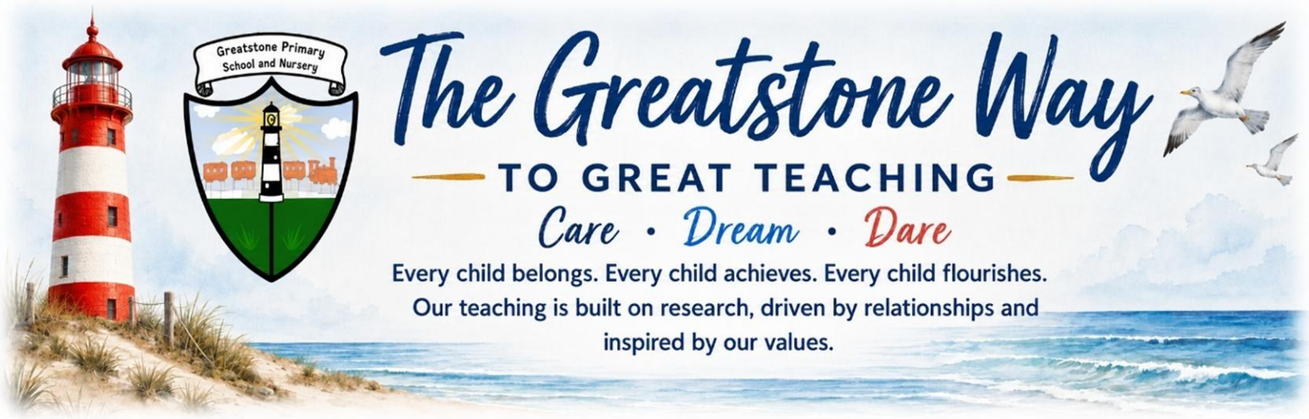

MATHS: THE GREATSTONE WAY CURRICULUM

SECTION ONE: INTENT

Intent

Mathematics is an essential part of everyday life. At Greatstone Primary School, we have high expectations for all pupils and believe that every child can achieve in mathematics. We want our children to develop confidence, curiosity and enjoyment in maths while gaining the knowledge and skills they need to solve problems, reason mathematically, think logically and work systematically and accurately.

Our aim is to provide a rich, ambitious and progressive mathematics curriculum from EYFS to Year 6. We use the White Rose Maths scheme of learning as the basis for our curriculum, ensuring that knowledge and skills are carefully sequenced and that learning builds progressively over time.

We want pupils to become fluent mathematicians with secure number sense and strong arithmetic skills. We recognise that fluency provides an essential foundation for reasoning and problem solving. Children are therefore given regular opportunities to develop efficient calculation strategies, recall key number facts and recognise mathematical patterns and relationships.

Through a mastery approach, children are encouraged to explore mathematical concepts in depth rather than move through learning too quickly. They use concrete resources, pictorial representations and abstract methods to develop a secure understanding of mathematical ideas. Children are encouraged to make connections between different areas of mathematics and recognise mathematics as an interconnected subject.

Mathematical language and discussion are central to our curriculum. We want pupils to confidently explain their thinking, justify their answers, make comparisons and use appropriate mathematical vocabulary. Teachers model high-quality mathematical language and provide opportunities for pupils to discuss strategies, identify patterns and explain their reasoning.

Problem solving and reasoning are embedded throughout our mathematics curriculum. Children learn that some problems may have one solution while others may have several possible solutions. They are taught to identify what they already know, what they need to find out and which mathematical knowledge or operation will help them solve a problem.

Children are encouraged to be resilient mathematicians. They learn that making mistakes is an important part of learning and are taught to check their answers, reconsider strategies and use trial and improvement where appropriate.

Ultimately, we want every child to leave Greatstone Primary School with secure mathematical foundations, confidence in their own mathematical ability and an understanding of how mathematics is used in everyday life and the wider world.

Implementation

Our mathematics curriculum is taught progressively from EYFS to Year 6 using the White Rose Maths scheme of learning as the core structure for curriculum sequencing and progression.

Teachers use their professional judgement to adapt White Rose materials to meet the needs of the pupils in their class. The scheme supports teachers in identifying small steps in learning, ensuring that new knowledge builds securely upon prior understanding.

EYFS

In EYFS, mathematics is developed through purposeful play, practical experiences, adult-led activities and opportunities within the continuous provision.

Children develop a secure understanding of number, numerical patterns, shape, space and measure. Adults model mathematical vocabulary and encourage children to notice patterns, compare quantities, explore relationships and explain their thinking.

Practical resources and real-life contexts allow pupils to explore mathematical ideas physically before representing them pictorially or symbolically. Mathematical learning is revisited frequently within the environment so that children have opportunities to practise and apply their developing knowledge.

Key Stage 1

In Years 1 and 2, children continue to develop strong number sense and secure understanding through practical resources, pictorial representations and increasingly abstract mathematical recording.

Lessons include opportunities for fluency, reasoning and problem solving. Particular emphasis is placed on developing secure knowledge of number bonds, place value and calculation strategies.

Teachers carefully consider how much fluency practice individual children require before progressing to reasoning and problem-solving activities. Children who require further practice receive additional opportunities to revisit concepts, while pupils who demonstrate secure understanding are challenged through deeper reasoning and application rather than simply moving ahead to new content.

Key Stage 2

Throughout Key Stage 2, children continue to develop fluency, accuracy and efficiency while increasingly applying their knowledge independently.

Arithmetic skills and number facts are regularly revisited so that pupils can recognise patterns and make connections across mathematical concepts. Multiplication tables and associated division facts are explicitly taught and practised to support wider mathematical learning.

As children progress through Key Stage 2, they are encouraged to become increasingly independent in how they record mathematics. Where appropriate, pupils record calculations and copy questions into their mathematics books rather than relying solely on printed worksheets. Printed resources may continue to be appropriate where they reduce unnecessary cognitive load or support pupils with additional needs.

Teaching for Mastery

Across the school, teaching reflects the principles of mastery. Teachers:

- break learning into carefully sequenced small steps;
- use concrete, pictorial and abstract representations;
- explicitly teach mathematical vocabulary;
- model mathematical thinking and reasoning;
- encourage children to explain and justify their answers;
- provide opportunities to identify patterns and make connections;
- revisit important knowledge regularly;
- use questioning to assess understanding and deepen thinking.

Children are encouraged to understand **why** a mathematical method works rather than simply memorising a procedure.

Fluency

Fluency is developed systematically across the school.

Children regularly practise number facts, arithmetic and calculation strategies appropriate to their age and stage of development. Teachers recognise that pupils may require different amounts of practice before knowledge becomes secure.

Assessment during lessons informs how much fluency practice each child needs. Once understanding is secure, pupils are provided with opportunities to apply their knowledge through reasoning and problem solving.

Reasoning and Problem Solving

Reasoning and problem solving are integral to mathematics lessons and are not treated as separate areas of learning.

Children are encouraged to:

- explain how they reached an answer;
- justify mathematical statements;
- identify and correct errors;
- compare different strategies;
- identify patterns and relationships;
- prove or disprove statements;
- solve problems in different contexts;
- investigate problems with more than one possible solution.

Teachers model appropriate mathematical language and provide sentence stems where necessary to support pupils in explaining their thinking.

Adaptive Teaching

Adaptive teaching ensures that all pupils can access ambitious mathematical learning.

Teachers identify barriers to learning and adapt teaching while maintaining high expectations. Adaptations may include:

- additional concrete resources;
- pictorial representations;
- pre-teaching or revisiting key vocabulary;
- worked examples;
- scaffolds and prompts;
- additional fluency practice;
- targeted adult support;
- adapted recording expectations;
- smaller steps within a concept;
- opportunities for further reasoning and depth.

Teaching assistants are used purposefully to support learning and address identified gaps while promoting pupil independence.

Pupils who grasp concepts quickly are challenged through depth, reasoning, connections and increasingly complex problems rather than accelerating prematurely onto new curriculum content.

Assessment

Assessment is an ongoing part of mathematics teaching.

Teachers use questioning, observation, pupil explanations, written work and assessment activities to identify what pupils know and understand and where misconceptions remain.

Assessment information is used to adapt teaching, provide additional practice and identify pupils who require further support or challenge.

Teachers regularly revisit previously taught knowledge to support long-term retention and ensure that pupils have secure foundations on which future mathematical learning can be built.

Impact

The impact of our mathematics curriculum is that pupils develop the knowledge, confidence and mathematical understanding required for the next stage of their education and for everyday life.

By the end of their time at Greatstone Primary School, we aim for pupils to:

- have secure number sense and strong arithmetic skills;
- recall key number facts efficiently;

- confidently select appropriate calculation strategies;
- demonstrate fluency across the mathematics curriculum;
- reason mathematically and explain their thinking clearly;
- use accurate mathematical vocabulary;
- solve increasingly complex problems independently;
- make connections between different areas of mathematics;
- use concrete, pictorial and abstract representations appropriately;
- check answers and recognise when solutions are reasonable;
- demonstrate resilience when mathematics is challenging;
- apply mathematical knowledge to unfamiliar and real-life situations;
- understand that mathematics is purposeful and relevant beyond the classroom.

Impact is evaluated through a range of evidence including formative and summative assessment, pupil progress information, book scrutiny, learning walks, pupil voice and discussions with teachers.

We expect pupils' books and classroom learning to demonstrate clear progression in knowledge and mathematical thinking. As pupils move through the school, they should become increasingly fluent, accurate and independent, while demonstrating greater sophistication in their reasoning and problem-solving skills.

Most importantly, we want our pupils to see themselves as mathematicians. They should leave Greatstone Primary School believing that mathematics is something they can understand, enjoy and succeed in.